Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

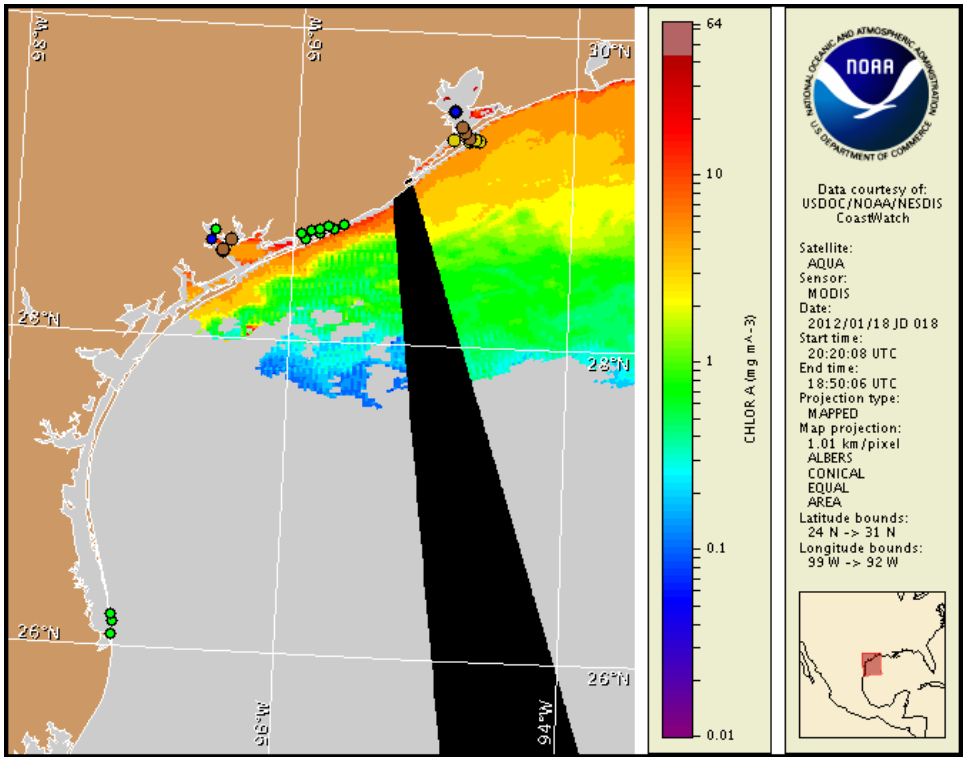
Thursday, 19 January 2012

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Tuesday, January 17, 2012



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from January 9 to 18 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Conditions Report

A patchy harmful algal bloom is present along the Texas coast. Patchy moderate impacts are possible in the Galveston and Matagorda Bay areas today through Sunday. Water samples last identified harmful algal blooms in the Port Aransas/Corpus Christi Bay area, alongshore South Padre Island, and within the lower Laguna Madre on January 5, and alongshore the Padre Island National Seashore region on November 28. Associated respiratory impacts remain possible in these areas. No additional impacts are expected at the coast in Texas today through Sunday, January 22. All Texas bays and coastal waters remain closed to commercial and recreational oyster harvesting due to blooms of the harmful algae Karenia brevis (red tide).

Analysis

A harmful algal bloom continues in patches along much of the Texas coastline; however, samples and satellite imagery indicate that *Karenia brevis* concentrations are dissipating in some regions.

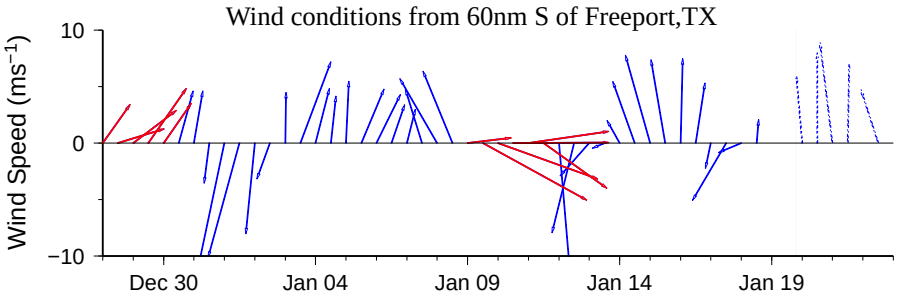
No new samples have been received along the Texas coastline. The most recent samples identified 'very low b' to 'low b' *K. brevis* concentrations in the Galveston Bay region (1/11; TPWD), 'not present' to 'low b' concentrations in the Matagorda Bay region (1/9-10; TPWD), and 'not present' to 'high' concentrations in the Port Aransas/Corpus Christi region (1/4-5; TPWD). *K. brevis* was not identified in the most recent samples and reports received from the South Padre Island and lower Laguna Madre regions, however further sampling is necessary to confirm that *K. brevis* is no longer present in the area (1/11; TPWD, Texas Coastal Naturalist).

Recent MODIS imagery (1/18; shown left) is partially obscured by clouds along the Texas coastline south of the Matagorda region, limiting analysis. Elevated to high chlorophyll (3-12 μg/L) is visible along- and offshore the Texas coastline from Sabine Pass to San Jose Island. Elevated chlorophyll (2-4 μg/L) is also visible stretching along- and offshore from Mustang Island to the Rio Grande in MODIS imagery from January 17 (not shown). Elevated chlorophyll at the coast is not necessarily indicative of the bloom's extent and may be due to the continued resuspension of benthic chlorophyll and sediments; in-situ sampling is required to confirm the presence of *K. brevis*.

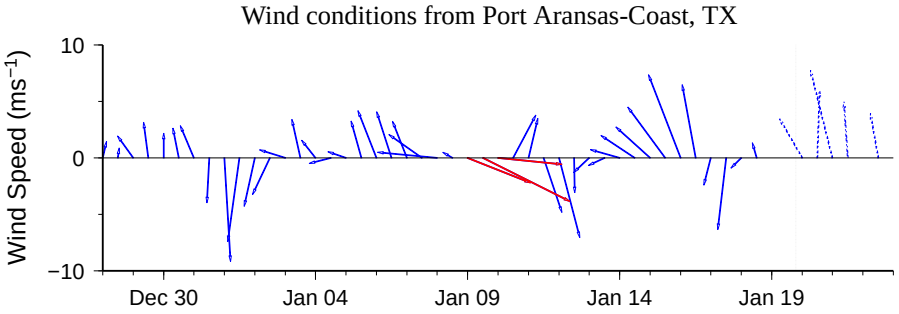
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 15km south from the Galveston Bay region, 30km south from the Matagorda Peninsula region, 15km south from the Port Aransas region, and <10km north (negligible) along the Padre Island National Seashore and South Padre Island regions from January 18 to 22. Onshore winds forecasted over the next several days may increase the potential for impacts along the Texas coastline.

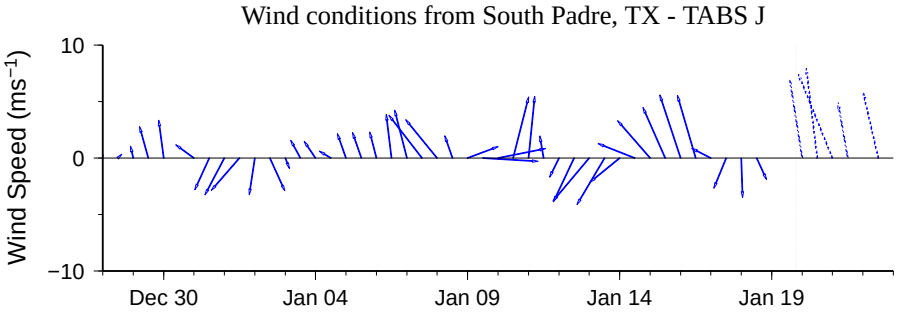
Derner, Kavanaugh

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive: http://tidesandcurrents.noaa.gov/hab/bulletins.html



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



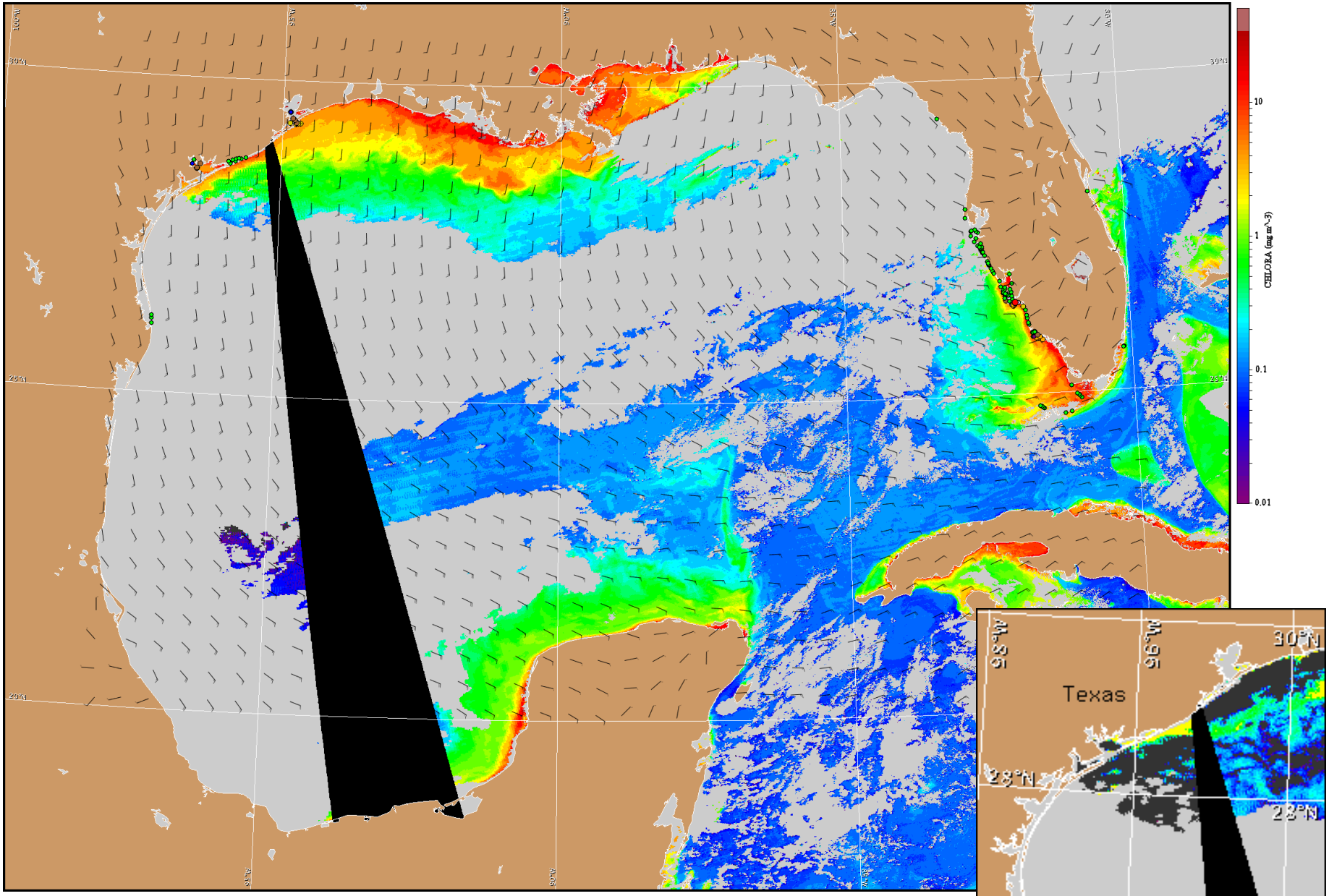


Wind Analysis

Galveston/Freeport: South winds (5-15kn, 3-8m/s) today through Sunday. Southwest winds (5-10kn, 3-5m/s) Sunday night.

Port Aransas: South winds (5-20kn, 3-10m/s) today through Friday. Southwest winds (5-10kn) Saturday shifting north in the afternoon. East winds (5-10kn) Saturday night shifting southeast after midnight. South winds (5-10kn) Sunday becoming east (5kn, 3m/s) Sunday night.

South Padre: South winds (10-20kn, 5-10m/s) today through Sunday.



Satellite chlorophyll image and forecast winds for January 20, 2012 12Z with cell concentration sampling data from January 9 to 18 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:
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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).